# Claims

1. An editing system for producing edit resultant clip from a plurality of clips to be edited, comprising:

editing means, which is composed of a plurality of processing modules for editing the clips to be edited, for performing on a plurality of clips to be edited the edit processing corresponding to the processing module selected among from the plurality of processing modules to produce edit resultant clip;

managing means for managing said edit resultant clip and said plurality of clips to be edited with the hierarchical structure, in order to show that which of clips to be edited is said edit resultant clip produced from; and

control means for controlling said editing means based on the information managed by said managing means.

2. The editing system according to claim 1, wherein said managing means has a clip database to register for each clip the information of a plurality of said clips.

3. The editing system according to claim 2, wherein said clip database includes the link information indicating the link state of said clips managed with the hierarchical structure.

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4. The editing system according to claim 3, wherein

said link information registered for each clip consists of the lower link information indicating the lower clips linked to said clip at a lower position and the upper link information indicating the upper clips linked to said clip at an upper position.

5. The editing system according to claim 4, wherein

said managing means register said clips to be edited in said clip database as a lower clip of said edit resultant clip, so as to correspond to the layer specified in the processing module and corresponding to said edit resultant clip.

6. The editing system according to claim 4, wherein:

said plurality of clips to be edited include the first clip to be edited and the second clip to be edited; and

said managing means register said first clip to be edited in said clip database as a lower clip firstly linked to said edit resultant clip and registers said second clip to be edited in said clip database as a lower clip secondly linked to said edit resultant clip, when said first clip to be edited is specified as the first layer and said second clip to be edited is specified as the second layer in the processing module selected in producing said edit resultant clip.

7.    The editing system according to claim 2, wherein:

said plurality of processing modules comprise an edit module for editing said edit resultant clip, a composite module for composing said edit resultant clip, and a special effect module for applying a special effect to said edit resultant clip.

8.    The editing system according to claim 7, further comprising

image processing means for applying the image processing respectively corresponding to said edit module, said composite module, and said special effect module to the video data of said clip to be edited.

9.    The editing system according to claim 8, further comprising

display means for displaying the graphical user interface respectively corresponding to said edit module, said composite module, and said special effect module on a display.

10.    The editing system according to claim 8, wherein said clip database has the module identification information indicating that which of said plurality of processing modules is said edit resultant clip produced among

from.

11.    The editing system according to claim 10, wherein
said control means controls said editing means and said
image processing means based on the information registered in
said clip database.

12.    The editing system according to claim 10, wherein
said control means controls said editing means based on
said module identification information of the edit resultant
clip specified by an edit operator.

13.    The editing system according to claim 10, wherein
said control means controls said editing means so as to
start up the processing module corresponding to the edit
resultant clip specified by an edit operator based on said
module identification information stored in said clip database.

14.    The editing system according to claim 10, wherein
said clip database has edit point data indicating a
plurality of editing points specified in producing said edit
resultant clip and image processing data indicating the image
processing applied to the video data of said clip to be edited
to produce said edit resultant clip.

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15.    The editing system according to claim 14, wherein

said control means controls the image processing timing

of said image processing means based on said editing point data

registered in said clip database, and controls the image

processing operation of said image processing means.


16.    The editing system according to claim 14, wherein

said editing point data is data representing the edit

start point and the edit end point of said clip to be edited,

and data representing the change point of said image processing

data applied to the video data of said edit resultant clip.


17.    The editing system according to claim 16, wherein

said editing point data is represented by time code in

said edit resultant clip and time code in said clip to be

edited.


18.    The editing system according to claim 17, wherein

the time code representing the editing point in said clip

to be edited is stored in said clip database so as to be

associated with the time code indicating the editing point

specified in said edit resultant clip.


19.    The editing system according to claim 16, wherein:

said edit resultant clip and said clip to be edited

respectively have the original time code starting from the start point of each clip; and

said managing means registers, at the edit start point of said clip to be edited, in said clip database as said editing point data the time code in said edit resultant clip and the time code in said clip to be edited which are associated each other, and registers at the edit end point of said clip to be edited in said clip database as said editing point data the time code in said edit resultant clip and the time code in said clip to be edited which are associated each other.

20. The editing system according to claim 14, wherein said image processing data consists of edit processing data indicating the content of the image processing corresponding to the edit processing specified by said edit module, the composite processing data indicating the content of the image processing corresponding to the composite processing specified by said composite module, and the special effect processing data indicating the content of the image processing corresponding to the special effect processing specified by said special effect module.

21. The editing system according to claim 20, wherein said edit data consists of edit processing identification data indicating the type of edit processing set by said edit

module and a plurality of edit processing parameters corresponding to the edit processing.

22.   The editing system according to claim 21, wherein said edit processing parameters are registered in said clip database so as to correspond to said editing point specified in said edit resultant clip.

23.   The editing system according to claim 22, wherein said control means controls said image processing means so as to perform on the video data of said clip to be edited the image processing in accordance with said edit processing parameters corresponding to said editing point at a timing in accordance with said editing point.

24.   The editing system according to claim 22, wherein: the editing point specified for said edit resultant clip includes the first editing point and the second editing point; said edit processing parameters include the first edit processing parameter set to a timing corresponding to said first editing point and the second edit processing parameter set to a timing corresponding to said second editing point; and said control means controls said image processing means so as to perform the image processing in accordance with said first edit parameter on the video data of said clip to be

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edited at a timing of said first editing point, and controls said image processing means so as to perform the image processing in accordance with said second edit parameter on the video data of said clip to be edited at a timing of said second editing point.

25.    The editing system according to claim 24, wherein
       said control means controls said image processing means so as to perform the image processing in accordance with the interpolation parameter interpolated between said first edit parameter and said second edit parameter on the video data of said clip to be edited during the period from said first editing point to said second editing point.

26.    The editing system according to claim 21, wherein
       said control means further has display means for displaying the cell showing the edit section of said clip to be edited and the change of said edit processing parameters specified for said clip to be edited, which correspond to the time axis direction.

27.    The editing system according to claim 20, wherein
       said composite processing data consists of a plurality of composite processing parameters corresponding to the composite processing set by said composite module.

28. The editing system according to claim 27, wherein
said plurality of composite processing parameters are
registered in said clip database so as to correspond to said
editing point specified in said edit resultant clip.

29. The editing system according to claim 28, wherein
said control means controls said image processing means
so as to perform on the video data of said clip to be edited
the image processing in accordance with said composite
processing parameters corresponding to said editing point at a
timing in accordance with said editing point.

30. The editing system according to claim 28, wherein:
the editing point specified for said edit resultant clip
includes the first editing point and the second editing point;
said composite processing parameters include the first
composite processing parameter set to a timing corresponding to
said first editing point and the second composite processing
parameter set to a timing corresponding to said second editing
point; and
said control means controls said image processing means
so as to perform the image processing in accordance with said
first composite parameter on the video data of said clip to be
edited at a timing of said first editing point, and controls

said image processing means so as to perform the image

processing in accordance with said second composite parameter

on the video data of said clip to be edited at a timing of said

second editing point.


31.   The editing system according to claim 30, wherein

said control means produces a plurality of interpolation

parameters based on said first composite processing parameter

and said second composite processing parameter, and controls

said image processing means so as to perform the image

processing in accordance with said plurality of interpolation

parameters during the period from said first editing point to

said second editing point.


32.   The editing system according to claim 31, wherein

said control means further has display means for

displaying the cell showing the edit section of said clip to be

edited and the change of said composite processing parameters

specified for said clip to be edited, which correspond to the

time axis direction.


33.   The editing system according to claim 20, wherein

said special effect processing data consists of special

effect identification data indicating the type of special

effect processing set by said special effect module, and a


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plurality of special effect parameters corresponding to said
special effect processing.

34. The editing system according to claim 33, wherein
said plurality of special effect processing parameters
are registered in said clip database so as to correspond to
said plurality of editing points specified in said edit
resultant clip.

35. The editing system according to claim 34, wherein
said control means controls said image processing means
so as to perform on the video data of said clip to be edited
the image processing in accordance with said special effect
processing parameters corresponding to said editing point at a
timing in accordance with said editing point.

36. The editing system according to claim 34, wherein:
the editing point specified for said edit resultant clip
includes the first editing point and the second editing point;
said special effect processing parameters include the
first special effect processing parameter set to a timing
corresponding to said first editing point and the second
special effect processing parameter set to a timing
corresponding to said second editing point; and
said control means controls said image processing means

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so as to perform the image processing in accordance with said

first special effect parameter on the video data of said clip

to be edited at a timing of said first editing point, and

controls said image processing means so as to perform the image

processing in accordance with said second special effect

parameter on the video data of said clip to be edited at a

timing of said second editing point.


37. The editing system according to claim 36, wherein

said control means produces a plurality of interpolation

parameters based on said first special effect processing

parameter and said second special effect processing parameter,

and controls said image processing means so as to perform the

image processing in accordance with said plurality of

interpolation parameters during the period from said first

editing point to said second editing point.


38. The editing system according to claim 37, wherein

said control means further has display means for

displaying the cell showing the edit section of said clip to be

edited and the change of said special effect processing

parameters specified for said clip to be edited, which

correspond to the time axis direction.


39. The editing system according to claim 14, wherein

said control means makes all clips linked to the upper position of the modified edit resultant clip disable, when said edit resultant clip registered in said clip database is modified.

40.  The editing system according to claim 14, wherein said control means produces a new edit resultant clip instead of the edit resultant clip before modification when said edit resultant clip is modified, and makes all clips linked to the upper position of the edit resultant clip before modification disable.

41.  The editing system according to claim 40, wherein said database has the identification flag indicating whether said each clip is enable or disable.

42.  The editing system according to claim 40, wherein said managing means,

registers said new edit resultant clip in said clip database with the clip identification code or clip name representing said edit resultant clip before modification, and

registers said edit resultant clip before modification in said clip database with the clip identification code or clip name which is different from the clip identification code or clip name representing said edit resultant clip before

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modification.

43.    The editing system according to claim 14, wherein
said control means produces a new edit resultant clip
instead of said edit resultant clip before modification when
said edit resultant clip is modified, and searches all clips
linked to the upper position of said edit resultant clip before
modification based on said link information of said clip
database to make the searched clips disable.

44.    The editing system according to claim 43, wherein
said managing means,
registers the information relating to said new edit
resultant clip in said clip database with the clip
identification code or clip name representing said edit
resultant clip before modification, and
registers the information relating to said edit resultant
clip before modification in said clip database with the clip
identification code or clip name which is different from the
clip identification code or clip name representing said edit
resultant clip before modification.

45.    The editing system according to claim 44, wherein
said clip database has the identification flag indicating
whether said each clip is enable or disable.

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46. The editing system according to claim 45, wherein said control means has re-execution means for re-executing in order to make said edit resultant clip which has been made disable by the modification processing enable.

47. The editing system according to claim 46, wherein said re-execution means having:

search process for referring said link information and said identification flag of said clip database to search the edit resultant clip to be re-executed among from said disable edit resultant clips; and

production process for producing a new video data corresponding to said searched edit resultant clip among from the video data of all lower clips linked to the lower position of the edit resultant clip searched by said search process.

48. The editing system according to claim 47, wherein said re-execution means, in said production process, produces a new edit resultant clip instead of said searched disable edit resultant clip, from said newly produced video data, said link information relating to said searched edit resultant clip registered in said clip database, said editing point data, and said image processing data.

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49. The editing system according to claim 48, wherein

said managing means

registers said edit resultant clip newly produced in said

clip database with the clip identification code or clip name

representing said searched disable edit resultant clip, and

registers said searched disable edit resultant clip in

said clip database with the clip identification code or clip

name which is different from the clip identification code or

clip name representing said researched disable edit resultant

clip.


50. The editing system according to claim 47, wherein

said re-execution means repeats said search process and

said production process until all clips managed with the

hierarchical structure by said managing means become enable.


51. The editing system according to claim 47, wherein

said re-execution means performs the re-execution on the

edit resultant clip which has the lower clips being all enable

among said disable edit resultant clips and which is at the

lowest position among said clips managed with said hierarchical

structure.


52. The editing system according to claim 47, wherein

said re-execution means, in said production process,

controls said image processing device based on the editing

point data and the image processing data corresponding to said

searched disable edit resultant clip, so as to produce said new

video data.

53.    An editing system for editing a plurality of clips to be

edited, comprising:

        editing means, which is composed of a plurality of

processing modules for editing the clips to be edited, for

applying to a plurality of clips to be edited the edit

processing corresponding to the processing module selected

among from the plurality of processing modules to produce edit

resultant clip;

        storing means for storing the module identification

information indicating that which of processing modules is said

edit resultant clip produced by using from; and

        control means for starting up the processing module

corresponding to said edit resultant clip based on said module

identification data stored in said storing means, when said

edit resultant clip is selected.

54.    The editing system according to claim 53, wherein

        said storing means has a clip database to register for

each edit resultant clip said module identification information.

55. The editing system according to claim 54, wherein

said clip database includes the link information

indicating the link state of said clips in the hierarchical

structure in order to manage said edit resultant clip and said

plurality of clips to be edited with the hierarchical structure.


56. The editing system according to claim 55, wherein

said plurality of processing modules have an edit module

for editing said plurality of clips to be edited, a composite

module for composing said plurality of clips to be edited, and

a special effect module for applying the special effects to

said plurality of clips to be edited.


57. The editing system according to claim 56, further

comprising:

user interface means composed of a graphical user

interface for edit processing corresponding to said edit module,

a graphical user interface for composite processing

corresponding to said composite module, and a graphical user

interface for special effect processing corresponding to said

special effect module; and

display means for displaying said graphical user

interface for edit processing, said graphical user interface

for composite processing, and said graphical user interface for

special effect processing on a display;

said control means wherein:

identifies the processing module corresponding to said selected edit resultant clip based on the module identification information registered in said clip database; and

starts up the processing module corresponding to said identified processing module and controls said display means to display the graphical user interface of the processing module corresponding to said identified processing module.

58.    The editing system according to claim 57, wherein said clip database has editing point data showing a plurality of editing points specified in producing said edit resultant clip and image processing data showing the content of the image processing applied to the video data of said clip to be edited to produce said edit resultant clip.

59.    The editing system according to claim 58, wherein said control means controls the image processing timing of said image processing means based on said editing point data registered in said clip database, and controls the image processing operation of said image processing means based on said image processing data registered in said clip database.

60.    The editing system according to claim 58, wherein said editing point data is data representing the edit

start point and the edit end point of said clip to be edited, and data representing the change point of said image processing data applied to the video data of said edit resultant clip.

61.    The editing system according to claim 58, wherein said image processing data consists of edit processing data indicating the content of the image processing corresponding to the edit processing specified by said edit module, the composite processing data indicating the content of the image processing corresponding to the composite processing specified by said composite module, and the special effect processing data indicating the content of the image processing corresponding to the special effect processing specified by said special effect module.

62.    The editing system according to claim 61, wherein said edit data consists of edit processing identification data indicating the type of edit processing set by said edit module and a plurality of edit processing parameters corresponding to the edit processing.

63.    The editing system according to claim 62, wherein said edit processing parameters are registered in said clip database so as to correspond to said editing point specified in said edit resultant clip.

64. The editing system according to claim 63, wherein

said control means controls said image processing means
so as to perform on the video data of said clip to be edited
the image processing in accordance with said edit processing
parameters corresponding to said editing point at a timing in
accordance with said editing point.

65. The editing system according to claim 63, wherein:

the editing point specified for said edit resultant clip
includes the first editing point and the second editing point;

said edit processing parameters include the first edit
processing parameter set to a timing corresponding to said
first editing point and the second edit processing parameter
set to a timing corresponding to said second editing point; and

said control means controls said image processing means
so as to perform the image processing in accordance with said
first edit parameter on the video data of said clip to be
edited at a timing of said first editing point, and controls
said image processing means so as to perform the image
processing in accordance with said second edit parameter on the
video data of said clip to be edited at a timing of said second
editing point.

66. The editing system according to claim 65, wherein

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said control means controls said image processing means
so as to perform the image processing in accordance with the
interpolation parameter interpolated between said first edit
parameter and said second edit parameter on the video data of
said clip to be edited during the period from said first
editing point to said second editing point.

67.    The editing system according to claim 62, wherein
       said control means controls display means to display the
cell showing the edit section of said clip to be edited and the
change of said edit processing parameters specified for said
clip to be edited, which correspond to the time axis direction.

68.    The editing system according to claim 62, wherein
       said control means controls said display means to display
said plurality of edit processing parameters set for said
selected edit resultant clip on said display as a part of said
graphical user interface for edit processing, based on the
information registered in said clip database.

69.    The editing system according to claim 68, wherein
       said control means controls said display means to display
said edit parameter so as to correspond to each editing point,
in order to visually know the change in the time axis direction
of said plurality of edit processing parameters, based on said

editing point data and said image processing data of said

selected edit resultant clip.


70.    The editing system according to claim 62, wherein

while the first processing module is being started up to

produce the first edit resultant clip, when the second edit

resultant clip linked as a lower clip of said first edit

resultant clip is selected,

said control means

refers said link information, said module identification

information, said editing point data, and said image processing

data which are registered as the information relating to said

second edit resultant clip of said clip database,

starts up the second processing module corresponding to

said second edit resultant clip based on said module

identification code, and

controls, based on said link information, said editing

point data, and said image processing data, said display means

to display the cell representing the edit section of clip

linked to the lower position of said second edit resultant clip

so as to associate with the editing point of said editing point

data, and to display each processing parameter of said image

processing data corresponding to said second processing module

so as to associate with the editing point of said editing point

data.

71.   An editing system for editing a plurality of clips to be

edited, comprising:

editing means, which is composed of a plurality of

processing modules for editing said clips to be edited, for

applying to a plurality of clips to be edited the edit

processing corresponding to the processing module selected

among from the plurality of processing modules to produce edit

resultant clip;

display means for displaying the graphical user interface

corresponding to said plurality of processing modules on a

display;

storing means for storing the image processing data

indicating the content of the image processing applied by the

edit processing performed by said editing means to the video

data of said clip to be edited, so as to correspond to said

edit resultant clip; and

control means for controlling said display means to

display said image processing data stored in said storing means

which corresponds to said selected edit resultant clip on a

display as a part of said graphical user interface, when said

edit resultant clip is selected.


72.   The editing system according to claim 71, wherein

said storing means has a clip database to register for

each edit resultant clip said image processing data.

73.     The editing system according to claim 72, wherein

said plurality of processing modules have an edit module·

for editing said plurality of clips to be edited, a composite

module for composing said plurality of clips to be edited, and

a special effect module for applying the special effects to

said plurality of clips to be edited.

74.     The editing system according to claim 73, further

comprising

image processing means for applying to the video data of

said clip to be edited the image processing respectively

corresponding to said edit module, said composite module, and

said special effect module.

75.     The editing system according to claim 74, wherein

said clip database has the module identification

information indicating that which of processing modules is said

edit resultant clip produced from.

76.     The editing system according to claim 75, wherein:

said graphical user interface is composed of a graphical

user interface for edit processing corresponding to said edit

module, a graphical user interface for composite processing

corresponding to said composite module, and a graphical user interface for special effect processing corresponding to said special effect module; and

said control means

identifies the processing module corresponding to said selected edit resultant clip based on the module identification information registered in said clip database; and

starts up the processing module corresponding to said identified processing module and controls said display means to display the graphical user interface of the processing module corresponding to said identified processing module.

77.   The editing system according to claim 76, wherein

said clip database has editing point data showing a plurality of editing points specified in producing said edit resultant clip and image processing data showing the contents of the image processing performed on the video data of said clip to be edited to produce said edit resultant clip.

78.   The editing system according to claim 77, wherein

said control means controls the image processing timing of said image processing means based on said editing point data registered in said clip database, and controls the image processing operation of said image processing means based on said image processing data registered in said clip database.

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79. The editing system according to claim 77, wherein

said editing point data is data representing the edit

start point and the edit end point of said clip to be edited,

and data representing the change point of said image processing

data applied to the video data of said edit resultant clip.


80. The editing system according to claim 77, wherein

said image processing data consists of edit processing

data indicating the content of the image processing

corresponding to the edit processing specified by said edit

module, the composite processing data indicating the content of

the image processing corresponding to the composite processing

specified by said composite module, and the special effect

processing data indicating the content of the image processing

corresponding to the special effect processing specified by

said special effect module.


81. The editing system according to claim 80, wherein

said edit data consists of edit processing identification

data indicating the type of edit processing set by said edit

module and a plurality of edit processing parameters

corresponding to the edit processing.


82. The editing system according to claim 81, wherein


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said edit processing parameters are registered in said
clip database so as to correspond to said editing point
specified in said edit resultant clip.

83.    The editing system according to claim 82, wherein
       said control means controls said image processing means
so as to perform on the video data of said clip to be edited
the image processing in accordance with said edit processing
parameters corresponding to said editing point at a timing in
accordance with said editing point.

84.    The editing system according to claim 82, wherein:
       the editing point specified for said edit resultant clip
includes the first editing point and the second editing point;
       said edit processing parameters include the first edit
processing parameter set to a timing corresponding to said
first editing point and the second edit processing parameter
set to a timing corresponding to said second editing point; and
       said control means controls said image-processing means
so as to perform the image processing in accordance with said
first edit parameter on the video data of said clip to be
edited at a timing of said first editing point, and controls
said image processing means so as to perform the image
processing in accordance with said second edit parameter on the
video data of said clip to be edited at a timing of said second

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editing point.

85.   The editing system according to claim 84, wherein
said control means controls said image processing means
so as to perform the image processing in accordance with the
interpolation parameter interpolated between said first edit
parameter and said second edit parameter on the video data of
said clip to be edited during the period from said first
editing point to said second editing point.

86.   The editing system according to claim 81, wherein
said control means controls display means to display the
cell showing the edit section of said clip to be edited and the
change of said edit processing parameters specified for said
clip to be edited, which correspond to the time axis direction.

87.   The editing system according to claim 81, wherein
said control means controls said display means to display
said plurality of edit processing parameters set for said
selected edit resultant clip on said display as a part of said
graphical user interface for edit processing, based on the
information registered in said clip database.

88.   The editing system according to claim 87, wherein
said control means controls said display means to display

said edit parameter so as to correspond to each editing point,
in order to visually know the change in the time axis direction
of said plurality of edit processing parameters, based on said
editing point data and said image processing data of said
selected edit resultant clip.

89.    An editing system for editing a plurality of clips to be
edited, comprising:

editing means, which is composed of a plurality of
processing modules for editing the clips to be edited, for
applying to said clips to be edited the edit processing
corresponding to the processing module selected among from the
plurality of processing modules to produce edit resultant clip;

managing means for managing said edit resultant clip and
said plurality of clips to be edited with the hierarchical
structure in order to show that which of clips to be edited is
said edit resultant clip produced from; and

display means for displaying on a display a graphical
user interface including a tree window for showing the link
state of a plurality of clips managed by said managing means
with the hierarchical structure, and a time line window showing
the edit section of said clip to be edited on the time axis.

90.    The editing system for editing a plurality of clips to be
edited, comprising:

editing means which is composed an edit module for

producing the edit resultant clip by applying the edit

processing to said clips to be edited, a composite module for

producing the edit resultant clip by applying the composite

processing to said clips to be edited, and a special effect

module for producing the edit resultant clip by applying the

special effect processing to said clips to be edited;

user interface means composed of a graphical user

interface for edit processing corresponding to said edit module,

a graphical user interface for composite processing

corresponding to said composite module, and a graphical user

interface for special effect processing corresponding to said

special effect module; and

display control means for displaying said graphical user

interface for edit processing on a display when the edit

processing is performed by said edit module, for displaying

said graphical user interface for composite processing on a

display when the edit processing is performed by said composite

module, and for displaying said graphical user interface for

edit processing on a display when the edit processing is

performed by edit module.


91.   An editing system for editing a clip to be edited,

comprising:

editing means for producing the edit resultant clip by

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applying the edit processing specified by an edit operator on said clip to be edited;

managing means for managing, with the hierarchical structure, the clip used by said edit processing of said editing means and the clip produced by said edit processing; and

control means for controlling said editing means based on the information managed by said managing means.

92. An editing system for producing the edit resultant clip by editing the supplied clip, comprising:

editing means for producing the edit resultant clip by applying the edit processing specified by an edit operator to the clip to be edited which is edit-processed;

managing means for managing each clip with the hierarchical structure by linking said clip to be edited to said edit resultant clip as a lower clip, or by linking said edit resultant clip to said clip to be edited as a upper clip; and

control means for controlling said editing means based on the information managed by said managing means.

93. An editing system for editing the supplied clip, comprising:

editing means for applying the edit processing to the

supplied clip;

managing means for managing all clips used or produced by said editing means, with the hierarchical structure which is expressed by the up and low relation, by linking each other, regarding the clip to be edit-processed in said edit processing as a lower clip and the clip produced by the edit processing in said edit processing as an upper clip; and

control means for controlling said editing means based on the information managed by said managing means.


94.    An editing method for producing the edit resultant clip from a plurality of clips to be edited, comprising the steps of:

applying the edit processing corresponding to the processing module selected among from a plurality of processing modules for editing a clip to be edited, to produce the edit resultant clip; and

managing said edit resultant clip and said clips to be edited with the hierarchical structure, in order to indicate that which of clips to be edited is said edit resultant clip produced from.


95.    The editing method according to claim 94, wherein said plurality of clips are managed by the clip database in which the information relating to said plurality of clips

100.    The editing method according to claim 98, wherein

said clip database has the module identification

information representing that which of processing modules is

said edit resultant clip produced from.


101.    The editing method according to claim 100, wherein

said control means starts up the processing module

corresponding to the edit resultant clip specified by an edit

operator based on said module identification information stored

in said clip database.


102.    The editing method according to claim 100, wherein

said clip database has editing point data showing a

plurality of editing points specified in producing said edit

resultant clip and image processing data showing the content of

the image processing applied to the video data of said clip to

be edited to produce said edit resultant clip.


103.    The editing method according to claim 102, wherein

the image processing timing applied to said clip to be

edited is controlled based on said editing point data

registered in said clip database, and the image processing

operation applied to said clip to be edited is controlled based

on said image processing data registered in said clip database.

104. The editing method according to claim 102, wherein

said editing point data is data representing the edit

start point and the edit end point of said clip to be edited,

and data representing the change point of said image processing

data applied to the video data of said edit resultant clip.


105. The editing method according to claim 102, wherein

said image processing data consists of edit processing

data indicating the content of the image processing

corresponding to the edit processing specified by said edit

module, the composite processing data indicating the content of

the image processing corresponding to the composite processing

specified by said composite module, and the special effect

processing data indicating the content of the image processing

corresponding to the special effect processing specified by

said special effect module.


106. The editing method according to claim 105, wherein

said edit processing data consists of edit processing

identification data indicating the type of edit processing set

by said edit module and a plurality of edit processing

parameters corresponding to the edit processing.


107. The editing method according to claim 106, wherein

said edit processing parameters are registered in said

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clip database so as to correspond to said editing point

specified in said edit resultant clip.


108.  The editing method according to claim 107, wherein

said control means performs on the video data of said

clip to be edited the image processing in accordance with said

edit processing parameters which correspond to said editing

point at a timing in accordance with said editing point.


109.  The editing method according to claim 107, wherein:

the editing point specified for said edit resultant clip

includes the first editing point and the second editing point;

said edit processing parameters include the first edit

processing parameter set to a timing corresponding to said

first editing point and the second edit processing parameter

set to a timing corresponding to said second editing point; and

said image processing means is controlled so as to

perform the image processing in accordance with said first edit

parameter on the video data of said clip to be edited at a

timing of said first editing point, and is controlled so as to

perform the image processing in accordance with said second

edit parameter on the video data of said clip to be edited at a

timing of said second editing point.


110.  The editing method according to claim 109, wherein

the image processing in accordance with the interpolation

parameter interpolated between said first edit parameter and

said second edit parameter is applied to the video data of said

clip to be edited during the period from said first editing

point to said second editing point.


111.   The editing system according to claim 106, wherein

the cell showing the edit section of said clip to be

edited and the change of said edit processing parameters

specified for said clip to be edited are displayed so as to

correspond to the time axis direction.


112.   The editing method according to claim 102, wherein

a new edit resultant clip is produced instead of the edit

resultant clip before modification in response to the

instruction from an edit operator to modify said edit resultant

clip, and all clips linked to the upper position of the edit

resultant clip before modification are searched based on said

link information of said clip database to make the searched

clips disable.


113.   The editing method according to claim 112, wherein:

the information relating to said new edit resultant clip

is registered in said clip database with the clip

identification code or clip name representing said edit

resultant clip before modification; and

the information relating to said edit resultant clip before modification is registered in said clip database with the clip identification code or clip name which is different from the clip identification code or clip name representing said edit resultant clip before modification.

114. The editing method according to claim 113, wherein said database has the identification flag indicating whether said each clip is enable or disable.

115. The editing method according to claim 114, wherein re-execution processing is performed in order to make the edit resultant clip which has been made disable by said modification processing enable in response to the instruction from an edit operator.

116. The editing method according to claim 115, wherein said re-execution processing includes:

search process for referring said link information and said identification flag of said clip database to search the edit resultant clip to be re-executed among from said disable edit resultant clips; and

production process for producing a new video data corresponding to said searched edit resultant clip among from

the video data of all lower clips linked to the lower position of the edit resultant clip searched by said search process.

117. The editing method according to claim 116, wherein

in said production process, a new edit resultant clip is produced instead of said searched disable edit resultant clip, from said newly produced video data, said link information, said editing point data, and said image processing data relating to said searched edit resultant clip registered in said clip database.

118. The editing method according to claim 117, wherein

said edit resultant clip newly produced is registered in said clip database with the clip identification code or clip name representing said searched disable edit resultant clip, and

said searched disable edit resultant clip is registered in said clip database with the clip identification code or clip name which is different from the clip identification code or clip name representing said researched disable edit resultant clip.

119. The editing method according to claim 116, wherein

said search process and said production process are repeated until all clips managed with the hierarchical

structure become enable.

120. The editing method according to claim 116, wherein
said search process searches the edit resultant clip
which has the lower clips being all enable among said disable
edit resultant clips and which is at the lowest position among
said clips managed with the hierarchical structure, to be
performed with the re-execution.

121. The editing method according to claim 116, wherein
said production process performs the image processing on
the video data of the clip to be linked lowly based on said
editing point data and said image processing data corresponding
to said searched disable edit resultant clip, so as to produce
said new video data.

122. An editing method of editing a plurality of clips to be
edited, comprising the steps of:
applying to a plurality of clips to be edited the edit
processing corresponding to the processing module selected
among from the plurality of processing modules to produce edit
resultant clip;
storing the module identification information indicating
that which of processing modules is said edit resultant clip
produced by using from; and

starting up the processing module corresponding to said

edit resultant clip based on said stored module identification

data, when said edit resultant clip is selected.

123. The editing method according to claim 122, wherein

said module identification information is stored by a

clip database in which the information relating to said

plurality of clips are registered for each clip.

124. The editing method according to claim 123, wherein

said clip database includes the link information

indicating the link state of each clip in the hierarchical

structure in order to manage said edit resultant clip and said

plurality of clips to be edited with the hierarchical structure.

125. The editing method according to claim 124, wherein

said plurality of processing modules comprise an edit

module for editing said plurality of clips to be edited, a

composite module for composing said plurality of clips to be

edited, and a special effect module for applying the special

effects to said plurality of clips to be edited.

126. The editing method according to claim 125, wherein:

the processing module corresponding to said selected edit

resultant clip is identified based on the module identification

information registered in said clip database; and

the processing module corresponding to said identified processing module is started up and the graphical user interface of the processing module corresponding to said identified processing module is displayed.


127. An editing method of editing a plurality of clips to be edited, comprising the steps of:

displaying on a display the graphical user interface corresponding to the processing module for editing the clip to be edited;

applying the edit processing corresponding to said processing module to said plurality of clips to be edited to produce the edit resultant clip;

storing the image processing data indicating the content of image processing applied to the video data of said clip to be edited by the edit processing performed by said editing means, so as to correspond to said edit resultant clip; and

displaying on a display said image processing data stored in said storing means which corresponds to said selected edit resultant clip as a part of said graphical user interface, when said edit resultant clip is selected.


128. The editing method according to claim 127, wherein said image processing data is stored by the clip database

in which the information relating to said plurality of clips is registered for each clip.

129. The editing method according to claim 128, wherein
said plurality of processing modules comprise, at least,
an edit module for editing said plurality of clips to be edited,
a composite module for composing said plurality of clips to be
edited, and a special effect module for applying the special
effects to said plurality of clips to be edited.

130. The editing method according to claim 129, wherein
. the image processing respectively corresponding to said
edit module, said composite module, and said special effect
module is applied to the video data of said clip to be edited
based on said image processing data registered in said clip
database.

131. The editing method according to claim 130, wherein
said clip database has the module identification
information indicating that which of processing modules is said
edit resultant clip produced from.

132. The editing method according to claim 131, wherein
said graphical user interface consists of a graphical
user interface for edit processing corresponding to said edit

module, a graphical user interface for composite processing corresponding to said composite module, and a graphical user interface for special effect processing corresponding to said special effect module; and

the processing module corresponding to said selected edit resultant clip is identified based on the module identification information registered in said clip database, the processing module corresponding to said identified processing module is started up, and the graphical user interface of the processing module corresponding to said identified processing module is displayed.

133. An editing method of editing the clip to be edited, comprising the steps of:

applying the edit processing specified by an operator to said clip to be edited to produce the edit resultant clip;

registering the information for managing with the hierarchical structure the clip used in said edit processing of said editing means and the clip produced by said edit processing; and

controlling said editing means based on said registered information.

134. An editing method of editing the supplied clip to produce the edit resultant clip, comprising the steps of:

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applying the edit processing specified by an edit

operator to the clip to be edited which is to be edit-processed

to produce the edit resultant clip; and

managing each clip with the hierarchical structure by

lining said clip to be edited to said edit resultant clip as a

lower clip or by linking said edit resultant clip to said clip

to be edited as an upper clip.


135. An editing method of editing the supplied clip,

comprising the steps of:

applying the edit processing to the supplied clip; and

managing all clips used and produced by said edit

processing with the hierarchical structure which is expressed

by the up and low relation by lining each other, regarding said

clip to be edited as a lower clip and said clip to be produced

by said edit processing as an upper clip.


136. A clip management device for an editing device editing

the supplied clip, comprising:

editing means for applying the edit processing to the

supplied clip; and

managing means for managing with the hierarchical

structure said clip to be edited and the clip produced by said

edit processing by linking each other, regarding said clip to

be edited in said edit processing as a lower clip and the clip


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produced by said edit processing as an upper clip.

137. A clip management method for an editing device editing the supplied clip, comprising the steps of:

applying the first edit processing specified by an edit operator to the clip to be edited which is to be edit-processed, to produce the first edit resultant clip;

managing with the hierarchical structure said clip to be edited and said first edit resultant clip by linking said clip to be edited to said edit resultant clip as a lower clip or linking said edit resultant clip to said clip to be edited as an upper clip;

applying the second edit processing specified by an edit operator to said first edit resultant clip, to produce the second edit resultant clip; and

managing with the hierarchical structure said clip to be edited, said first edit resultant clip, and said second edit resultant clip, by linking said first edit resultant clip to said second edit resultant clip as a lower clip or linking said second edit resultant clip to said first edit resultant clip as an upper clip.

138. An editing system for editing the clip to be edited, comprising:

editing means for applying the edit processing specified

by an edit operator to the clip to be edited to produce the edit resultant clip;

managing means for managing with the hierarchical structure all clips by linking said edit resultant clip and said clip to be edited so as to be in the up and low relation; and

control means for controlling said managing means, when the content of said edit resultant clip is modified, so as to make all clips linked to the upper position of said modified edit resultant clip disable based on the information managed by said managing means.

139. An editing method for editing the clip to be edited, comprising the steps of:

applying the edit processing specified by an edit operator to the clip to be edited to produce the edit resultant clip;

managing with the hierarchical structure all clips by linking said edit resultant clip and said clip to be edited so as to be in the up and low relation each other; and

when the content of said edit resultant clip is modified, making all clips linked to the upper position of said modified edit resultant clip disable.

140. A clip managing method applied for an editing device

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editing the clip to be edited, comprising the steps of:

applying the edit processing specified by an edit operator to the clip to be edited to produce the edit resultant clip;

managing with the hierarchical structure all clips by linking said edit resultant clip and said clip to be edited so as to be in the up and low relation each other; and

when the content of said edit resultant clip is modified, making all clips linked to the upper position of said modified edit resultant clip disable.

141. An editing system for editing the clip to be edited, comprising:

editing means for applying the edit processing specified by an edit operator to said clip to be edited to produce the edit resultant clip;

managing means for managing with the hierarchical structure all clips by linking said edit resultant clip and said clip to be edited so as to be in the up and low relation each other; and

control means, when the content of said edit resultant clip is modified, for controlling said editing means to newly produce said modified edit resultant clip and all edit resultant clips linked to the upper position of said modified edit resultant clip disable, based on the information relating

to the hierarchical structure managed by said managing means.

142. An editing method for editing the clip to be edited, comprising the steps of:

applying the edit processing specified by an edit operator to said clip to be edited to produce the edit resultant clip;

managing with the hierarchical structure all clips by linking said edit resultant clip and said clip to be edited so as to be in the up and low relation each other; and

newly producing said modified edit resultant clip and all edit resultant clips linked to the upper position of said modified edit resultant clip.